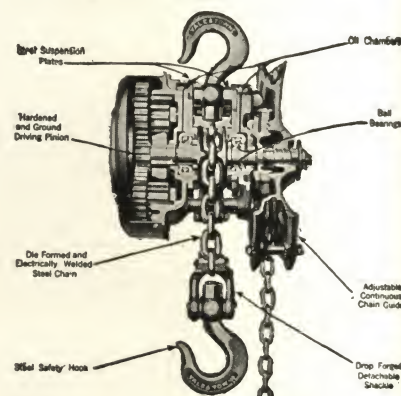


Yale Spur-Gearred Ball-Bearing Chain Blocks



These Spur-Gearred Chain Blocks have a mechanical efficiency as high as can be obtained in any hoisting equipment. In operation they are safe, speedy, lift easily and quickly and are extremely long-lived. The load is held securely at all times and is lowered by reversing the pull on the hand chain. Steel suspension parts carry the load. The parts are few, and of generous proportions. All bearings are large and thoroughly lubricated. There are no delicate parts to get out of order. So constructed that there is a "line of steel" from the suspension hook to the load hook. These Blocks are rated on the long ton basis, 2,240 pounds to the ton. Each Block is tested to a load 50 percent greater (in long tons) than its rated capacity. While no Block is intended to lift overloads, this test insures strength to resist injury from strains and shock such as slippage of sling chains, etc. The steel load chains are die-formed and have electrically welded smoothly finished links. Chain is heat-treated to toughen it, lengthen its life and insure uniform strength throughout. No welding is necessary when renewing or adding extra lengths of chain as the load steel shackle and steel hook are detachable.

Principles of Operation—Yale Spur-Gearred Chain Blocks are operated on the familiar and fundamental mechanical principle of the "planetary" gear system—intermediate gears revolving planet-fashion around a central pinion and transferring the motion of that pinion to a cage rigidly connected to the load sheave. Operating by means of this enclosed system of planetary gears multiplies enormously the efforts of the operator, and enables him to lift with ease and rapidity loads that would tax the strength of many strong men. The larger of the illustrations to the right makes this clear. When the hand chain is pulled pinion "A" revolves. At two points on diametrically opposite sides of its perimeter the pinion transmits its energy to the intermediate gears "B-B", held in position by the gear-cage "E". The pinions of gears "B-B" mesh with the fixed internal gear "D", which acts as the fulcrum to compel revolution of the gear-cage "E". This gear-cage is keyed directly to the load sheave "F", which rotates and lifts the load chain. Thus, in Yale Spur-Gearred Blocks, all of the gears are pinioned together in a balanced train. The thrust of the gear-teeth is so balanced by the counteracting pressures of the intermediate gears that the load is equally distributed at every point and on both bearings. Notice in the illustration that the thrust of the tooth pressure at points "G" is neutralized by the counteracting pressure at points "H". Thus wear on the bearings is reduced to a minimum and, since the design has provided for the lowest possible stress in each part, the high initial efficiency of the Block is maintained through many years of heavy service, however, purchasers are cautioned not to use the blocks in excess of the rated capacity.



Planetary Gear System of the YALE Spur-Gearred Chain Block (Cover removed)

Prices 1/4 to 10 Tons Capacity

Rated Capacity in Tons	List Price Complete Standard Lift	Standard Lift in Feet*	Minimum Distance Between Hooks	Extra Lift	Chain Pull to Lift Full Load	Chain Overhauled to Lift Load One Foot	Weight Lbs. Net
				Price Per Foot			
1/4	\$ 70.00	8	13"	\$1.80	47 lbs.	12 1/2'	61
1/2†	70.00	8	13"	1.80	57 lbs.	21 "	61
1	90.00	8	16"	1.90	77 lbs.	31 "	94
1 1/2	120.00	8	18"	2.00	103 lbs.	35 "	136
2	140.00	9	21"	2.10	112 lbs.	42 "	204
3	180.00	10	32"	3.00	107 lbs.	70 "	212
4	220.00	10	37"	3.20	116 lbs.	84 "	301
5	280.00	12	45"	4.30	102 lbs.	126 "	413
6	330.00	12	46"	4.30	125 lbs.	126 "	411
8	400.00	12	49"	5.40	128 lbs.	168 "	500
10	480.00	12	54"	6.50	132 lbs.	210 "	612

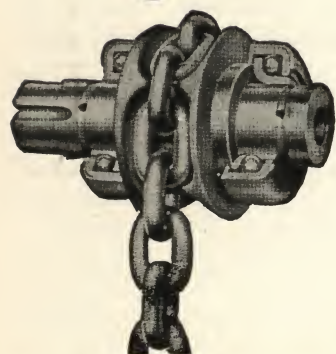
12 to 40 ton prices and particulars on request

*"Standard Lift in feet" means the travel of the Lower Hook.

Hand Chain pull is based on a ton of 2,000 pounds.

†We make a 1/2-ton special "Quick Speed" Spur-Gearred Block which is the same as the 1-ton regular with the exception that the gear ratio has been changed to double the speed at half load—list price \$90.00.

Hand Chain pull 85 bs. Hand Chain overhaul 14 ft. to lift load one foot.



Showing application of Ball-Bearings on which the steel load sheave rotates and the manner in which the steel balls of large diameter reduce friction where friction is greatest. Ball-Bearings are completely enclosed and protected from dirt and grit by felt and steel washers.

Discount.....

Yale Screw-Geared Chain Blocks

Where the higher speed of the Yale Spur-Geared Block is not required, the Yale Screw-Geared is recommended. It is adapted for portable use, being light, powerful and durable. It holds the load and will not lower until the hand chain is pulled.

The Yale Screw-Geared Block has about one-half the efficiency of the Yale Spur-Geared. It operates with a light chain pull, but the relatively larger over-haul of hand chain to lift the load makes it proportionally slow in operation. It is adapted also to horizontal work when pulling heavy loads on rollers or skids.

The load is carried by two Yale steel chains. Each of these chains has ample strength to carry a load up to the rated capacity of the block.

The Yale Screw-Geared Block is operated on the worm wheel and screw principle. The hand wheel is keyed to a hardened steel worm shaft which in turn meshes with a bronze worm wheel. Two steel load sheaves carry the load chain. The entire rotating mechanism is enclosed between two machined castings, all parts being thoroughly bathed in graphite and oil.

The drop forged detachable shackles and oval pins, make it possible to readily detach the lower cross-head and hook and lengthen or shorten the load chain without cutting or welding the last link. This is a distinct advantage when a change in the length of the standard load is required.

The Yale Screw-Geared Block holds the load securely in any position. Raising or lowering the load can only be accomplished by exerting a pull on the hand chain.

Prices and Information on Yale Screw-Geared Chain Blocks

Rated Capacity in Tons	List Price Complete	Reg. Lift in Feet	Minimum Distance Between Hooks in Inches	Extra Lift Price per Foot†	Net Weight in Lbs.	Chain Pull to Lift Full Load	Chain Over-hauled to Lift Load One Foot
1/2	\$ 50.00	8*	14	\$2.50	46	68 lbs.	40 feet
1	60.00	8	16	2.60	59	87 lbs.	59 feet
1 1/2	80.00	8	19	2.70	81	94 lbs.	80 feet
2	100.00	9	21	2.80	104	115 lbs.	93 feet
3	150.00	10	25	3.00	187	132 lbs.	126 feet
4	190.00	10	26	3.80	221	142 lbs.	155 feet

*Figures denote the travel of bottom hook with regular length of chains. No deduction is made for blocks with less than the regular length of chains.

†Extra lift per foot includes sufficient hand and load chain to increase the travel of the lower hook 1 foot.

Yale Differential Chain Blocks

The Yale Differential Block is for occasional service where comparatively light loads must be handled infrequently. The overhaul of hand chain compares with the Yale Spur-Geared Block, but the hand chain pull is greater by two and a half times. The block, however, is light, easily handled. It holds the load and will not lower until the hand chain is pulled.

It has the fewest parts and on account of its reliability and simplicity, is especially adapted for use in garages, and for all ordinary hoisting purposes where the higher power and durability of the Yale Spur-Geared and Screw-Geared Blocks are not required.

The regular Yale drop-forged steel hooks are used on all Yale Differential Blocks.

Although the cost of the Yale Differential Block is low, it possesses the excess capacity that is the distinctive feature of all Yale hoisting equipment.

Yale Differential Chain Blocks 1/4 to 2 Tons

Rated Capacity in Tons	List Price Complete	Reg. Lift in Feet	Minimum Distance Between Hooks	Extra Lift. Price per Foot	Weight in Lbs. Net	Chain Pull	
						Lbs.	Feet
1/4	\$36.00	6	17"	\$4.80	23	72	18
1/2	42.00	7	21"	4.80	30	110	24
1	56.00	8	26"	5.00	50	190	30
1 1/2	72.00	8 1/2	32"	5.40	81	225	36
2	90.00	9	39"	5.60	121	300	42

Note—Special Catalog of Yale Hoists furnished on request.

Discount.....